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caron

## (53) LIPOSOME PREPARATION AND PRODUCTION THEREOF

- (11) 2-160722 (A) (43) 20.6.1990 (19) JP  
 (21) Appl. No. 63 315080 (22) 15.12.1988  
 (71) NIPPON OIL & FATS CO LTD(1) (72) HIDEHIKO HIBINO(4)  
 (51) Int. Cl. A61K35/78,A61K9/127,A61K31/35,A61K31/70,A61K35/78

**PURPOSE:** To obtain a liposome preparation having excellent stability by treating a flavonoid with an alkaline solution and converting into liposome.

**CONSTITUTION:** A phospholipid or a mixture of phospholipid and cholesterol is formed in the form of a thin film by reverse-phase evaporation process. A solution of free flavonoid dissolved in an alkaline solution having pH of  $\leq 10$  is added to the thin film and uniformized by ultrasonic process to obtain a stable emulsion. The objective liposome preparation containing a flavonoid is produced by treating the emulsion with an extruder. The preparation can be infused into a body by intravenous or transperitoneal infusion to keep high flavonoid concentration in the body and is effective as a platelet coagulation inhibitor, a vasodilator, an antihistaminic, an anti-inflammatory, an antispasmodic, an estrone-like agent and a scavenger for free radical, etc.

## (54) CALCITONIN-CONTAINING INJECTION

- (11) 2-160725 (A) (43) 20.6.1990 (19) JP  
 (21) Appl. No. 63 314095 (22) 13.12.1988  
 (71) MITSUBISHI KASEI CORP (72) YOSHINORI MATSUOKA(2)  
 (51) Int. Cl. A61K37/30,A61K9/08,A61K37/30

**PURPOSE:** To obtain an analgesic injection containing avian calcitonin and stable over a long period by suppressing the concentration of a pH modifier to be added for stabilization to a low level and adjusting the pH of the injection to weakly acidic state.

**CONSTITUTION:** The objective avian calcitonin-containing injection contains a pH modifier at a concentration of  $\leq 10\text{mM}$  ( $\text{m-mol/l}$ ), preferably  $2\text{-}10\text{mM}$  ( $\text{m-mol/l}$ ) and has weakly acidic pH (especially 5.0-7.0). The pH modifier is citric acid, acetic acid, phosphoric acid, tartaric acid, lactic acid, their sodium salt or potassium salt or sodium hydroxide, etc., and is used singly or as a proper combination of two or more compounds.

## 54) REMOVAL OF TRACE SULFUR COMPOUND IN HYDROCARBON

- (11) 2-160728 (A) (43) 20.6.1990 (19) JP  
 (21) Appl. No. 63 317111 (22) 15.12.1988  
 (71) KAWASAKI STEEL CORP (72) YUKIO ASAMI(2)  
 (51) Int. Cl. C07C7/12,C10G29/16

**PURPOSE:** To remove trace sulfur compound in an aromatic hydrocarbon by contacting with a desulfurizing agent composed mainly of copper oxide having specific BET surface area and pore volume and reduced at a specific temperature in hydrogen stream.

**CONSTITUTION:** An aromatic hydrocarbon is made to contact with a desulfurizing agent composed mainly of copper oxide at 150-179°C to remove trace sulfur compound contained in the hydrocarbon. The desulfurizing agent is composed mainly of copper oxide, has a BET surface area of  $10\text{-}150\text{m}^2/\text{g}$  and a pore volume of  $\geq 0.1\text{cc g}$  and is produced by supporting 20-60wt.% of copper oxide on a carrier and reducing the oxide at 150-200°C in hydrogen stream. The desulfurization can be carried out in high efficiency in the absence of hydrogen.